

Claims

[c1] What is claimed is:

1. A combination lock having a second lock mechanism comprising:

a lock body comprising at least a push-button and a lock tongue in relation with each other, the lock tongue having a locking position and a releasing position;

a stopping member, positioned in the lock body, having a first position for constraining the lock tongue in the locking position and a second position for releasing constraint of the lock tongue;

a first lock mechanism comprising a plurality of dials and a shifting plate installed in the lock body, the shifting plate and the dials moving correspondingly, the shifting plate having a clamping position for constraining the stopping member to remain in the first position and a unlocking position for releasing the stopping member from being constrained; and

a second lock mechanism comprising a sleeve and a linking member installed in the lock body and in relation with each other, the sleeve having a keyhole for allowing a key to be inserted and for being rotated by the key such that the linking member is shifted and forces the

stopping member to change positions.

- [c2] 2. The combination lock of claim 1 wherein the linking member is coupled to an eccentric position of the sleeve at one end.
- [c3] 3. The combination lock of claim 1 wherein the sleeve and the linking member operate by means of mesh transmission.
- [c4] 4. The combination lock of claim 1 wherein the sleeve has a cam connected to the linking member such that the sleeve and the linking member move correspondingly.
- [c5] 5. The combination lock of claim 4 wherein the linking member has a resilient member for providing a recovering ability such that the linking member and the cam remain in contact.
- [c6] 6. The combination lock of claim 1 wherein the stopping member is pivotally positioned in the lock body and is rotated for changing positions.
- [c7] 7. The combination lock of claim 6 wherein the linking member is coupled to an eccentric position of the stopping member.
- [c8] 8. The combination lock of claim 1 wherein the linking

member is pivotally positioned in the lock body and the sleeve has a lever for moving the linking member.

- [c9] 9. A combination lock having a second lock mechanism comprising:
- a lock body comprising at least a push-button and a lock tongue in relation with each other, the lock tongue having a locking position and a releasing position;
 - a stopping member, positioned in the lock body, having a first position for constraining the lock tongue in the locking position and a second position for releasing constraint of the lock tongue;
 - a first lock mechanism comprising a plurality of dials and a shifting plate installed in the lock body, the shifting plate and the dials moving correspondingly, the shifting plate having a clamping position for constraining the stopping member to remain in the first position and a unlocking position for releasing the stopping member from being constrained; and
 - a second lock mechanism comprising a sleeve and a flexible transmission member positioned in the lock body, the sleeve having a keyhole for allowing a key to be inserted and for being rotated by the key, the flexible transmission member being respectively connected to the sleeve and the stopping member such that the sleeve rotates the flexible transmission member and the stop-

ping member simultaneously for changing positions of the stopping member.

[c10] 10. The combination lock of claim 9 wherein the flexible transmission member is a circular member positioned around the sleeve and the stopping member.

[c11] 11. The combination lock of claim 10 wherein the flexible transmission member, the sleeve, and the stopping member operate by means of mesh transmission.

[c12] 12. The combination lock of claim 9 wherein the flexible transmission member is a linear belt respectively connected to the sleeve and the stopping member.

[c13] 13. The combination lock of claim 9 wherein the flexible transmission member is modulated by a tension modulator.

[c14] 14. A combination lock having a second lock mechanism comprising:
a lock body comprising at least a push-button and a lock tongue in relation with each other, the lock tongue having a locking position and a releasing position;
a stopping member, positioned in the lock body, having a first position for constraining the lock tongue in the locking position and a second position for releasing constraint of the lock tongue;

a first lock mechanism comprising a plurality of dials and a shifting plate installed in the lock body, the shifting plate and the dials moving correspondingly, the shifting plate having a clamping position for constraining the stopping member to remain in the first position and a unlocking position for releasing the stopping member from being constrained; and
a sleeve, positioned in the lock body, having a keyhole for allowing a key to be inserted and for being rotated by the key, the sleeve further comprising an extension part for forcing the stopping member to change positions when the sleeve rotates.

- [c15] 15. The combination lock of claim 14 wherein the extension part and the stopping member operate by means of mesh transmission.